P O L I S H J O U R N A L O F E N T O M O L O G Y
P O L S K I E P I S M O E N T O M O L O G I C Z N E

VOL. **77**: 5-9 Bydgoszcz 30 March 2008

Appendiseta robiniae (GILETTE), 1907 (Hemiptera, Aphidoidea) - an aphids species new to Poland

BEATA BOROWIAK-SOBKOWIAK*, ROMA DURAK**, BARBARA WILKANIEC*

* Agricultural University of Poznań, Departament of Entomology,
Dąbrowskiego 159, 60-594 Poland, e-mail: borowiak@au.poznan.pl
** University of Rzeszow, Departament of Zoology,
Cegielniana 12, 35-959 Rzeszów, Poland

ABSTRACT. The first record of *Appendiseta robiniae* is given from Poland. The alate viviparous females, oviparous females and males were described.

KEY WORDS: Aphidoidea, *Appendiseta robiniae, Robinia pseudoacacia*.

INTRODUCTION

A genus *Appendiseta* is widespread in North America. It differs in some of features from genus *Pterocallis*: two pairs of anterior prothoracic marginal hairs and a small hair arising from the siphunculus (RICHARDS 1965).

According to REMAUDIERE (1997) the genus *Appendiseta* belongs to the family Myzocallidinae and tribus Myzocallidini. It consists of only one species connected with *Robinia pseudoacacia*. *Appendiseta robiniae* is holocyclic and monoecious aphid species.

STUDY AREA AND MATERIAL EXAMINED

In 2007 big colonies of *Appendiseta robiniae* were observed on the underside leaves of the Black Locust (*R. pseudoacacia*) in Łężeczki near Sieraków (grid WU 82) and Poznań (grid XU 30). It is the first record of this species occurrence. The alate viviparous, larvae and nymphs were observed from the begining of September to the end of season vegetation. In September sexuales appeared: oviparous females and alate males, which were collected

in October. The material examined: 4 alate viviparous females, 3 oviparae females, 3 males (leg. BOROWIAK-SOBKOWIAK B., det. BOROWIAK-SOBKOWIAK B., DURAK R.).

Description (based on BLACKMAN & EASTOP 1994)

Viviparae all alate, with cauda knobbed, anal plate bilobed. Secondary rhinaria on Ant. III transversely elongate. Ant. PT/Base about 0,5. Siphunculi short, truncated cones with a single short hair attached at base. Viviparae pale yellow-green with spinopleural and marginal longitudinal rows of pale powder spots, on undersides of leaves of *Robinia pseudoacacia* and *R. neomexicana*, and also new recorded from *Sophora japonica*. Sexuales (alate males and apterous oviparae) occur in September - November. Widespread in North America, and introduced into Europe (England, Germany, Hungary, Italy, Spain, Switzerland).

Description and measurements (BOROWIAK-SOBKOWIAK B., DURAK R.)

Alate viviparous females (Fig. 1)

Colour when alive: pale yellow-green with black pigment at apices of antennal segments. Hind femur with rather large, black spot near apex.

Body: 1,49mm mean (1,4-1,56); lengths of antenna: 1,08mm mean (1,06-1,12); lengths of antennal segments: III – 0,4mm (0,38-0,42); IV – 0,24mm (0,22-0,26); V – 0,19mm (0,18-0,2); VI – 0,15mm (0,14-0,17), PT/Base: 0,4; secondary rhinaria situated on III segments: 8-9; length of leg: 1,13mm (1,08-1,22); length of rostrum: 0,28mm (0,28-0,3); siphunculus: 0,06mm; cauda: 0,08mm (0,06-0,1).

Oviparae females (Fig. 2)

Oviparae females are apterous, spindle-shaped, colour when alive green-beige. On the dorsal side of the body there are transversal rows of tubercles with single hear on each of them.

Body: 1,33mm (1,32-1,36); lengths of antenna: 0,62mm (0,6-0,66); lengths of antennal segments: III – 0,2mm; IV – 0,1mm; V – 0,1mm; VI – 0,12mm; PT/Base: 0,5; length of leg: 0,79mm (0,78-0,8); length of rostrum: 0,24mm (0,22-0,26); siphunculus: 0,03mm; cauda: 0,045mm (0,04-0,05).

Alate males (Fig. 3)

Colour when alive: yellow-green or yellow-beige. Head and thorax brown, abdomen with dark strips on the dorsal side. Cauda knobbed darker than viviparous.

Body: 0,93mm (0,86-1,04); lengths of antenna: 1,05mm (0,98-1,1); lengths of III antennal segments: 0,35mm (0,32-0,36); PT/Base: 0,5; length of leg: 0,95mm (0,9-0,98); length of rostrum: 0,24mm (0,2-0,28); siphunculus: 0,04mm; cauda: 0,04mm; rhinaria situated on antennal segments: III – 15-19, IV – 4-6, V – 6-8, VI – 2-4.

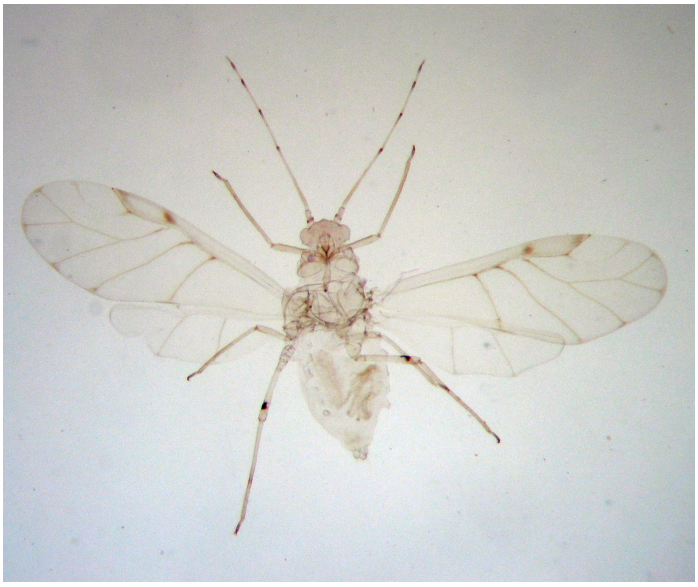

Fig. 1. *Appendiseta robiniae* - alata vivipara.

Fig. 2. *Appendiseta robiniae* - apterous ovipara.

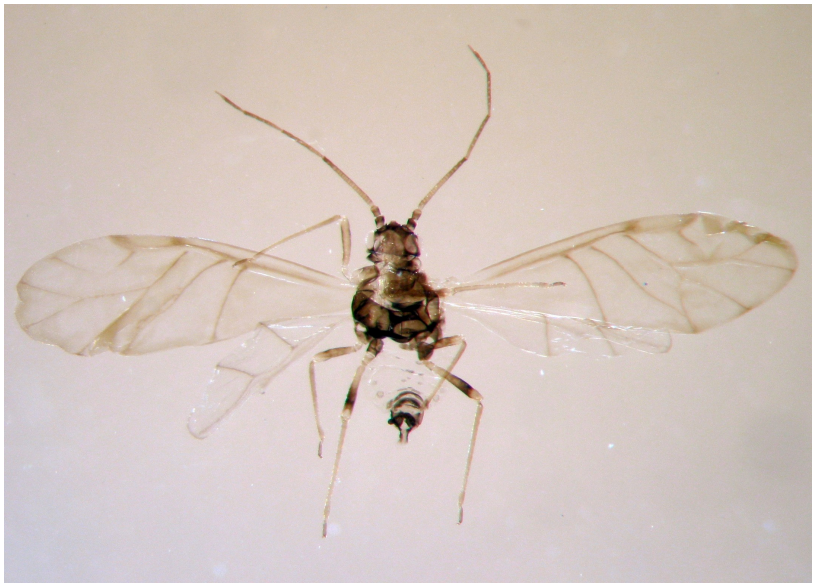

Fig. 3. *Appendiseta robiniae* - alate male.

Bionomics

The aphid are more likely to settle on a young than on a old part of hosts. The species preferred young leaves. The big aphid (about 50 specimens) colonies were not visited by ants.

Key to aphids on *Robinia pseudoacacia* occurring in Poland

1. All viviparae alate, with cauda knobbed and plate bilobed. Secondary rhinaria on antennal segments III transversely elongate. Length of terminal process of last antennal segment divided by length of basal part of last segment including primary rhinarium about 0,5; siphunculus short, truncated cones …….. ***Appendiseta robiniae* (GILETTE)**
-. Apterous viviparae normally present. Cauda finger-shaped, and plate entire. Secondary rhinaria round. Length of terminal process of last antennal segment divided by length of basal part of last segment including primary rhinarium more than 2. Siphunculus tubular ……. ***Aphis craccivora* KOCH**

REFERENCES

BLACKMAN R.L., EASTOP V.F. 1994. Aphids on the World's Trees. An Identification and Information Guide. The Natural History Museum, London, 987 pp.

REMAUDIERE G.M. 1997. Catoloque of the world's *Aphididae*. Aphididae, Homoptera, Aphidoidea. INRA, Paris 474 pp.

RICHARDS W.R. 1965. *Callaphidini* of Canada. Mem. Ent. Soc. Can. **44**: 1-49

Received: January 02, 2008
Accepted: January 18, 2008